

NOTES ON BROMELIACEAE, XXVIII

Lyman B. Smith

NAVIA

(Supplement to revision in Bromeliaceae of the Guayana Highland, Mem. New York Bot. Gard. 14, pt. 3: 15. 1967)

37b. *N. ROBINSONII* L. B. Smith, sp. nov. A *N. naviculare* Smith & Steyermark sepalis subduplo majoribus et foliis subtriplo minoribus differt.

PLANT short-caulescent but branching. LEAVES numerous, rosulate at the stem ends, 10 cm long; blades spreading, narrowly triangular, 9 mm wide but mostly involute and appearing narrower, covered beneath with fine irregularly stellate scales but becoming wholly glabrous, densely serrulate with fine antrorse teeth. INFLORESCENCE subsessile, digitate from 5-7 spikes, glabrous; primary bracts broadly ovate, acuminate, pungent, much shorter than the spikes, entire, strongly nerved, red-brown; spikes ellipsoid, many-flowered, 2 cm long. FLORAL BRACTS ovate, acuminate, much shorter than the sepals, white. SEPALS free, narrowly subtriangular with a narrowly cucullate apex, apiculate, 13 mm long, white, the posterior ones narrowly alate-carinate. PETALS unknown. CAPSULE ovoid, beaked, 5 mm long; seeds naked, 0.8 mm long, reticulate, yellow-brown. Pl. I, fig. 1: Leaf-margin x 1; fig. 2: Inflorescence x 1; fig. 3: Posterior sepal x 5.

VENEZUELA: BOLIVAR: On rocks in sun, Cerro Jáua, near summit, alt. 2000 m, 4 January 1965, Brewer 250 (US, type; VEN).

This species is gratefully dedicated to Harold E. Robinson whose research in bromeliad anatomy has proved both inspiring and frustrating but never uninteresting.

68a. *N. LEPIDOTA* L. B. Smith, sp. nov. A *N. parvula* L. B. Smith, cui affinis, foliorum laminis subtus lepidibus latis adpressis dense vestitis, sepalis anterioribus auctis differt.

PLANT caulescent, forming cushions (! Maguire); stem erect, over 7 cm long, 6 mm in diameter. LEAVES (living) rosulate at the apices of the stems, 55 mm long; blades spreading or recurving, narrowly triangular, pungent, 6 mm wide, covered beneath with broad appressed cinereous scales, densely and finely serrulate. INFLORESCENCE nidular in the center of the leaf-rosette, few-flowered and apparently simple, 1 cm in diameter. FLORAL BRACTS ovate, attenuate or cuspidate, exceeding the sepals, thin, white, serrulate, nerved; flowers subsessile. SEPALS free, thin, serrulate, the anterior flat, much reduced, the posterior conduplicate, oblong, acute, to 8 mm long. OVARY slightly more than half inferior. Pl. I, fig. 4: Posterior sepal x 5.

VENEZUELA: AMAZONAS: West escarpment edge, northwest of Cumbre Camp, summit of Cerro de la Neblina, Río Yatua, alt. 1700-2000 m, 13 January 1954, Maguire, Wurdack & Bunting 37288 (US, type; NY).

NEOREGELIA

N. LEVIANA L. B. Smith, sp. nov. A N. margaretae L. B. Smith, cui affinis, foliorum vaginis maximis, valde inflatis et rosulam subglobosam efformantibus differt.

PLANT stemless, propagating vegetatively by short stout stolons. LEAVES 6-10; sheaths 9 cm long, about equaling the blades, ample, strongly inflated and forming a subglobose narrow-mouthed rosette, dark red-purple, densely appressed-lepidote on both sides; blades abruptly spreading, ligulate, acute, 25-30 mm wide, thick-coriaceous but pliable, subdensely punctulate on both sides, laxly serrate with antrorse to retrorse spines 1 mm long. INFLORESCENCE simple, few-flowered, 1 cm in diameter. FLOWERS obscurely pedicellate. SEPALS ovate, acute, 20 mm long, connate for 3 mm, sky blue; ovary subcylindric. Pl. I, fig. 5: Leaf x 1.

BRAZIL: AMAZONAS: Rio Caubouris, 1967, Margaret Mee s. n. (US, type; National Geographic Society, original painting).

At the wish of Mrs. Margaret Mee, this new species is dedicated to the memory of the late Rino Levi, whose enthusiasm for discovering and cultivating Brazilian flowers has been a constant inspiration to his friends.

PITCAIRNIA

(Supplement to revision in Phytologia 10: 1. 1964)

124a. P. MARNIER-LAPOSTOLLEI L. B. Smith, sp. nov. A P. billbergioide L. B. Smith scapi vaginis pectinato-serratis differt.

PLANT stemless, flowering ca. 3 dm high. LEAVES rosulate; blades dimorphic, some reduced to slender dark spines, others foliaceous, deciduous, linear, attenuate, ca. 5 dm long and 20 mm wide (! photo), green on both sides, entire at least above the line of abscission. SCAPE straight, slender, sparsely white-flocculose; scape-bracts strict, imbricate but slightly exposing the scape, ovate, attenuate, pectinate-serrate with dark spines. INFLORESCENCE simple, densely ellipsoid, few-several-flowered. FLORAL BRACTS erect, straight, ovate, acuminate, much exceeded by the sepals, sparsely white-flocculose; flowers subsessile, erect. SEPALS triangular-ovate, attenuate, 36 mm long, the posterior ones alate-carinate; petals 8 cm long, linear, acute, red, about equaling the erect stamens but recoiling and exposing them; ovary 4/5 superior; ovules caudate. Pl. I, fig. 6: Scape and inflorescence x 1/2; fig. 7: Posterior sepal x 1.

PERU: Without further locality, cultivated at Jardin Botanique "Les Cèdres," St-Jean-Cap-Ferrat, France, March 1968, J. Marnier-Lapostolle s. n. (US, type).

PUYA

(Supplement to revision in Phytologia 10: 454. 1964)

When I revised Pitcairnia in Phytologia 10: 1. 1964, I kept there P. ferruginea and P. nana on the basis of their slightly inferior ovaries and P. mirabilis on account of its somewhat

zygomorphic flowers. However, Puya can not be characterized by completely superior ovaries, and the really significant characters appear to be the twisting together of the petals after anthesis and the winged seed. The transfer of all three to Puya is as follows:

28a. P. FERRUGINEA (R. & P.) L. B. Smith, comb. nov. Pitcairnia ferruginea R. & P. Fl. Peruv. 3: 36. 1802; L. B. Smith, Phytologia 10: 29. 1964.

62a. P. MIRABILIS (Mez) L. B. Smith, comb. nov. Pitcairnia mirabilis Mez, Fedde Rep. Nov. Spec. 3: 6. 1906; L. B. Smith, Phytologia 10: 30. 1964. Pitcairnia mirabilis Mez var. tucumana Castellanos, Anal. Mus. Nac. Hist. Nat. Buenos Aires 36: 53, pl. 5. 1929. (A size variant whose former distinction has been erased by subsequent intermediates).

48a. P. NANA Wittm. Mededeel Rijks Herb. 29: 85. 1916. Pitcairnia nana (Wittm.) L. B. Smith, Phytologia 7: 5. 1959; 10: 30. 1964.

33a. P. SIMULANS L. B. Smith, sp. nov. A P. thomasiana André, cui valde affinis, statura minore, foliis e magna parte retrorse spinosis, bracteis florigeris acuminatis differt.

PLANT short-caulescent, flowering ca. 1.8 m high. LEAVES 9 dm long; sheaths suborbicular, 9 cm long, pale-lepidote and serrulate toward apex; blades $\frac{1}{2}$ cm wide, minutely brown-lepidote between the nerves beneath, glabrous above, laxly serrate with broad nearly black often retrorse spines 8 mm long. SCAPE elongate, exceeding the leaves; scape-bracts small and inconspicuous, long-acuminate from a broadly ovate base. INFLORESCENCE laxly bipinnate, covered with a pale tomentum except for the petals; primary bracts broadly ovate, acuminate, much shorter than the naked sterile bases of the branches; branches sublaxly many-flowered, the lateral subspreading, to 23 cm long, the terminal longer and with stouter rachis. FLORAL BRACTS broadly ovate, much exceeded by the sepals, soon glabrous, acute or the lowest of the terminal branch acuminate; flowers suberect; pedicels very short and stout, obconical. SEPALs broadly ovate, acute, ca. 25 mm long, ecarinate, coriaceous; petals $\frac{1}{2}$ cm long; stamens included. Pl. I, fig. 8: Leaf-margin x 1; fig. 9: Floral bract and flower x 1.

PERU: LIBERTAD: Rocky slope, Munmalca, Hacienda Cochabamba, Huamachuco, alt. 3200 m, 26 June 1958, Lopez & Sagastegui 2815 (US, type; TRP).

8a. P. TROLLII L. B. Smith, sp. nov. A P. spathacea (Griseb.) Mez, cui valde affinis, pedicellis longioribus ad apicem versus incrassatis bracteis florigeras subduplo superantibus differt.

PLANT known only from fragments, but certainly much more than 1 m high. LEAVES over 7 dm long; blades ca. 2 cm wide, covered with pale appressed scales beneath, laxly serrate with dark an-

trorse spines 2 mm long. SCAPE unknown. INFLORESCENCE amply bipinnate, lax, soon glabrous, the fine white stellate trichomes uniform and completely deciduous; primary bracts ovate, acuminate, much shorter than the sterile bases of the branches; branches subspreading, to 26 cm long, laxly flowered. FLORAL BRACTS broadly ovate, apiculate, mostly about half as long as the pedicels, thin, nerved, entire; flowers spreading; pedicels slender but strongly enlarged upward, to 20 mm long. SEPALS oblong, rounded, 15 mm long, carinate toward base, sulcate when dry; petals ca. 3 cm long. Pl. I, fig. 10: Floral bract and flower x 1; fig. 11: Sepal x 1.

BOLIVIA: POTOSI: Thickets at edge of forest, Montecanto, 19° 31' S, 64° 09' W, 24 November 1927, Troll 661 (M, type; US, photo).

TILLANDSIA

T. TURNERI Baker var. PATENS L. B. Smith, var. nov. A var. turneri inflorescentia elongata sublaxa, spicis patentibus differt.

Inflorescence subcylindric, sublax, 30 cm long; branches spreading.

VENEZUELA: TACHIRA: On small tree in dense tangled dwarf forest, above Quebrada de Las Copas, headwaters of Río Quinimarí, 35 km south of Alquitrana, alt. 2600-2630 m, 13 January 1968, Steyermark & Dunsterville 100872 (VEN, type; US, photo).

Plate I

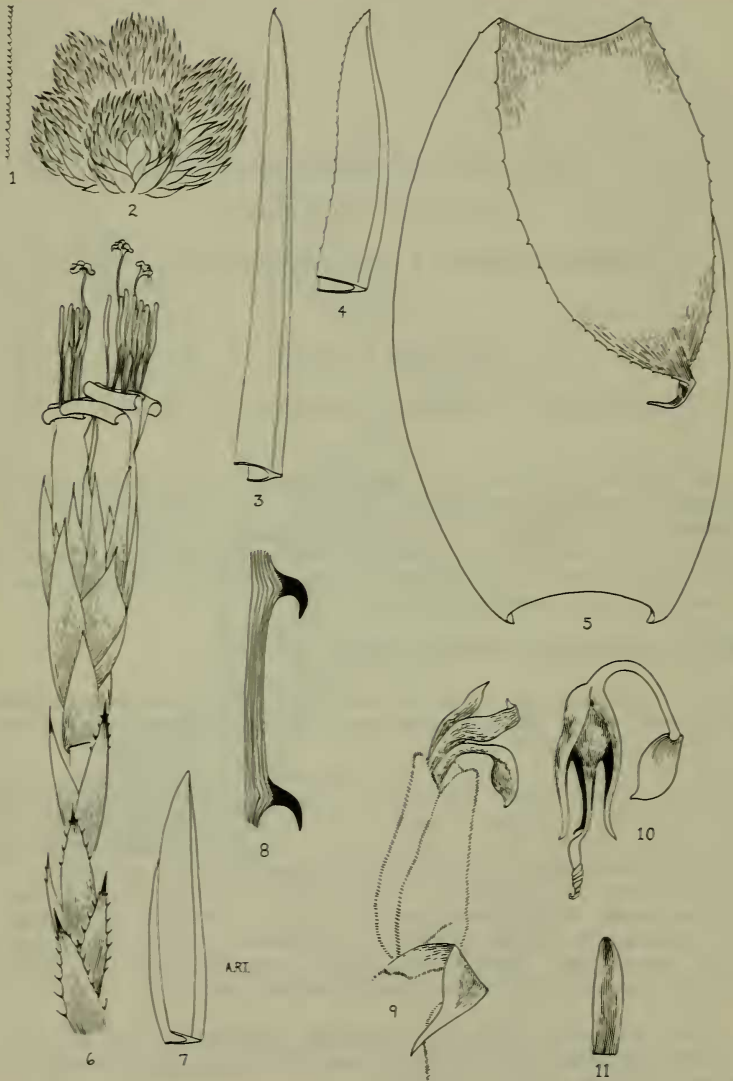


Fig. 1-3: *Navia robinsonii*; 4: *N. lepidota*; 5: *Neoregelia leviana*; 6, 7: *Pitcairnia marnier-lapostollei*; 8, 9: *Puya simulans*; 10, 11: *trollii*.